WHAT IS CLAIMED IS:

1   1.   A transceiver comprising:

2   (a) a medium access controller;

3   (b) a first set of control logic in the medium access controller for configuring the

4   transceiver for communicating over two or more wireless carriers with a network routing

5   center;

6   (b) a second control logic in the medium access controller for monitoring each of the

7   two or more wireless carriers for a service characteristic; and

8   (c) a third control logic in the medium access controller further for selecting, based on

9   the monitored service characteristic, one of the two or more wireless carriers that the first

10   control logic configures the transceiver to use to communicate with the network routing

11   center.

1   2.   The transceiver of claim 1, wherein each of the first, second, and third control

2   logic is selected from the group consisting of: hardware based control logic, software based

3   control logic and combination hardware-software based control logic.

1   3.   The transceiver of claim 1, wherein the service characteristic comprises a

2   quality of service characteristic for the wireless carrier.

1   4.   The transceiver of claim 3, wherein the quality of service characteristic

2   comprises a bit error rate for the respective wireless carrier.

1   5.   The transceiver of claim 3, wherein the quality of service characteristic

2   comprises a signal to noise ratio for the respective wireless carrier.

1   6.   The transceiver of claim 3, wherein the quality of service characteristic

2   comprises a packet loss rate for the respective wireless carrier.

1   7.   The transceiver of claim 3, wherein the quality of service characteristic

2   comprises path fade for the respective wireless carrier.

1   8.   The transceiver of claim 3, wherein the quality of service characteristic

2 comprises packet latency for the respective wireless carrier.

1   9.   The transceiver of claim 3, wherein the quality of service characteristic

2 comprises network latency for the respective wireless carrier.

1   10.   The transceiver of claim 1, wherein the service characteristic comprises a least

2 cost routing characteristic for the wireless carrier.

1   11.   The transceiver of claim 1, further comprising an application program

2 interface that is consistent with an application program interface in the network routing center

3 regardless of which of the two or more wireless carriers are selected by the medium access

4 controller.

1   12.   The transceiver of claim 1, wherein the network routing center is further for

2 communicating with one or more nodes.

1   13.   The transceiver of claim 12, wherein the one or more nodes are connected to

2 the network routing system by a wide area network.

1   14.   The transceiver of claim 12, wherein the one or more nodes are connected to

2 the network routing system by a local area network.

1   15.   The transceiver of claim 12, wherein the one or more nodes are each for

2 communicating with the network routing center using a node-selected wireless carrier

3 selected from the two or more wireless carriers.

1   16.   The transceiver of claim 15, wherein at least one of the one or more nodes is

2 for communicating with the mobile communicator through the network routing center.

1   17.   The transceiver of claim 16, wherein the wireless carrier selected by the at

2 least one node is different from the frequency selected by the medium access controller.

1   18.   The transceiver of claim 1, comprising a data packet for transmission.

1 19. The transceiver of claim 18, comprising an applications data monitor buffer.

1 20. The transceiver of claim 19, wherein the applications data monitor buffer

2 comprises a packet processor for processing the data packet, said processing comprising

3 determining a message type, priority, packet length, destination and air interface for the data

4 packet.

1 21. The transceiver of claim 20, wherein the medium access controller is for

2 selecting the one wireless carrier based on one or more of the determined message type,

3 priority, packet length, destination and air interface for the data packet.

1 22. The transceiver of claim 21, wherein the medium access controller is further

2 for converting the data packet to an appropriate protocol based on the one selected wireless

3 carrier.

1 23. The transceiver of claim 1, wherein the two or more wireless carriers are each

2 selected from the group consisting of: code division multiple access, cellular digital packet

3 data, 1XRTT, time division multiple access, global system for mobile communications,

4 general packet radio service, enhanced data rates for global evolution, wide band code

5 division multiple access, ARDIS, MOBITEX and IRIDIUM.

1 24. A network routing center comprising:

2 (a) a registration matrix for storing one or more carrier indicators for indicating the

3 current wireless carrier, each carrier indicator corresponding to one of one or more mobile

4 communicators;

5 (b) two or more wireless carrier gateways for communicating with the one or more

6 mobile communicators, each wireless carrier gateway using a different wireless carrier; and

7 (c) a processor for updating each of the one or more carrier indicators to reflect the

8 wireless carrier for the wireless carrier gateway that receives a message from the respective

9 mobile communicator.

1 25. The network routing center of claim 24, further comprising a received

2 message buffer for storing each message received from the respective mobile communicator.

1   26.   The network routing center of claim 25, wherein each message comprises a

2   communicator identifier for identifying the respective mobile communicator that transmitted

3   the message.

1   27.   The network routing center of claim 26, wherein each carrier indicator stored

2   in the registration matrix is stored in a registration record indexed by a matching

3   communicator identifier.

1   28.   The network routing center of claim 27, wherein the processor is further for

2   validating each message by searching the registration matrix for the matching communicator

3   identifier that matches the communicator identifier of the message.

1   29.   The network routing center of claim 24, wherein each message comprises a

2   message type.

1   30.   The network routing center of claim 29, wherein the processor is further for

2   composing a transmission path for each message according to the message type.

1   31.   The network routing center of claim 30, wherein each message type is selected

2   from the group consisting of: peer-to-peer, peer-to-client host and hybrid peer-to-peer/peer-

3   to-client host.

1   32.   The network routing center of claim 24, wherein each message comprises a

2   message destination.

1   33.   The network routing center of claim 32, wherein the processor is further for

2   composing a transmission path for each message according to its message destination.

1   34.   The network routing center of claim 24, wherein each message comprises a

2   communicator identifier for identifying the mobile communicator that transmitted each

3   message.

1   35.   A network routing center comprising:

2   (a) a registration matrix for storing one or more carrier indicators for indicating the

3   current wireless carrier, each carrier indicator corresponding to one of one or more mobile

4   communicators;

5   (b) two or more wireless carrier gateways for communicating with the one or more

6   mobile communicators, each wireless carrier gateway using a different wireless carrier;

7   (c) a message for transmitting to one of said mobile communicators; and

8   (d) a processor for selecting one of the one or more wireless carrier gateways for

9   transmitting the message according to the respective indicator for the one mobile

10   communicator.

1   36.   The network routing center of claim 35, wherein the message comprises a

2   message destination indicating the one mobile communicator.

1   37.   A network routing center comprising:

2   (a) a registration matrix for storing a plurality of carrier indicators, each carrier

3   indicator for indicating the current wireless carrier for one of a plurality of mobile

4   communicators;

5   (b) two or more wireless carrier gateways for communicating with the plurality of

6   mobile communicators, each wireless carrier gateway using a different wireless carrier; and

7   (c) a processor for updating each carrier indicator to reflect the wireless carrier for the

8   wireless carrier gateway that receives a message from the respective mobile communicator.

1   38.   The network routing center of claim 37, further comprising a received

2   message buffer for storing each message received from a mobile communicator.

1   39.   The network routing center of claim 38, wherein each received message

2   comprises a communicator identifier for identifying the respective mobile communicator that

3   transmitted the respective message to the wireless carrier gateway that received the message.

1   40.   The network routing center of claim 39, wherein each carrier indicator stored

2   in the registration matrix is stored in a registration record indexed by a matching

3   communicator identifier.

1   41.   The network routing center of claim 40, wherein the processor is further for

2   validating each message by searching the registration matrix for the matching communicator

3   identifier that matches the communicator identifier of the message.

1   42.   The network routing center of claim 37, wherein each message comprises a

2   message type.

1   43.   The network routing center of claim 42, wherein the processor is further for

2   composing a transmission path for each message according to its message type.

1   44.   The network routing center of claim 43, wherein each message type is selected

2   from the group consisting of: peer-to-peer, peer-to-client host and hybrid peer-to-peer/peer-

3   to-client host.

1   45.   The network routing center of claim 37, wherein each message comprises a

2   message destination.

1   46.   The network routing center of claim 45, wherein the processor is further for

2   composing a transmission path for each message according to its message destination.

1   47.   The network routing center of claim 37, wherein each message comprises a

2   communicator identifier for identifying the mobile communicator that transmitted the

3   message.

1   48.   In a mobile communicator, a method for communicating with a network

2   routing center, comprising:

3   (a) monitoring each of the two or more wireless carriers for a service characteristic;

4   (b) selecting, based on the monitored service characteristic, one of the two or more

5   wireless carriers; and

6   (c) communicating with the network routing center using the selected wireless carrier.

1   49.   The method of claim 48, wherein the step of communicating comprises

2   configuring a transceiver for using the selected wireless carrier.

1   50.   The method of claim 48, wherein the service characteristic comprises a quality

2   of service characteristic for the wireless carrier.

1   51.   The method of claim 50, wherein the quality of service characteristic

2   comprises a bit error rate for the respective wireless carrier.

1   52.   The method of claim 50, wherein the quality of service characteristic

2   comprises a signal to noise ratio for the respective wireless carrier.

1   53.   The method of claim 51, wherein the quality of service characteristic

2   comprises a packet loss rate for the respective wireless carrier.

1   54.   The method of claim 52, wherein the quality of service characteristic

2   comprises path fade for the respective wireless carrier.

1   55.   The method of claim 50, wherein the quality of service characteristic

2   comprises packet latency for the respective wireless carrier.

1   56.   The method of claim 50, wherein the quality of service characteristic

2   comprises network latency for the respective wireless carrier.

1   57.   The method of claim 48, wherein the service characteristic comprises a least

2   cost routing characteristic for the wireless carrier.

1   58.   The method of claim 48, wherein the step of communicating comprises

2   communicating with one or more nodes through the network routing center.

1   59.   The method of claim 48, wherein the step of communicating comprises

2   transmitting a data packet.

1   60.   The method of claim 59, comprising determining a message type, priority,

2   packet length, destination and air interface for the data packet.

1   61.   The method of claim 60, wherein the step of selecting comprises selecting the

2   one wireless carrier based on one or more of the determined message type, priority, packet

3   length, destination and air interface for the data packet.

1   62.   The method of claim 61, comprising converting the data packet to an

2   appropriate protocol based on the one selected wireless carrier.

1   63.   The method of claim 48, wherein the two or more wireless carriers are each

2   selected from the group consisting of: code division multiple access, cellular digital packet

3   data, 1XRTT, time division multiple access, global system for mobile communications,

4   general packet radio service, enhanced data rates for global evolution, wide band code

5   division multiple access, ARDIS, MOBITEX and IRIDIUM.

1   64.   In a network routing center, a method for communicating, comprising:

2   (a) storing one or more carrier indicators, each carrier indicator indicating a current

3   wireless carrier for one of one or more mobile communicators;

4   (b) communicating with the one or more mobile communicators using two or more

5   wireless carrier gateways, each wireless carrier gateway using a different wireless carrier; and

6   (c) upon receiving a message from one of the one or more mobile communicators,

7   updating the respective one or more carrier indicators to reflect the wireless carrier for the

8   wireless carrier gateway that receives the message.

1   65.   The method of claim 64, wherein the step of storing comprises storing the one

2   or more carrier indicators in a registration matrix.

3   66.   The method of claim 65, wherein the step of storing further comprises storing

4   each carrier indicator in a registration record in the registration matrix indexed by a matching

5   communicator identifier.

1   67.   The method of claim 66, comprising validating the message by searching the

2   registration matrix for the matching communicator identifier that matches the communicator

3   identifier of the message.

1   68.   The method of claim 64, comprising identifying the respective mobile

2   communicator that transmitted the message using a communicator identifier included in the

3   message.

1   69.   The method of claim 64, wherein the message comprises a message type.

1   70.   The method of claim 69, comprising composing a transmission path for the

2   message according to the message type.

1   71.   The method of claim 70, wherein each message type is selected from the

2   group consisting of: peer-to-peer, peer-to-client host and hybrid peer-to-peer/peer-to-client

3   host.

1   72.   The method of claim 64, wherein each message comprises a message

2   destination.

1   73.   The method of claim 72, comprising composing a transmission path for the

2   message according to its message destination.

1   74.   In a network routing center, a method for communicating, comprising:

2   (a) communicating with one or more mobile communicators using two or more

3   transceivers, each transceiver using a different wireless carrier; and

4   (a) storing one or more carrier indicators, each carrier indicator indicating a current

5   one of the different wireless carriers being used by one said mobile communicators;

6   (d) selecting one of the two or more transceivers for transmitting a message to one of

7   said mobile communicators, the step of selecting performed based on the respective indicator

8   for the one mobile communicator.

1   75.   The method of claim 72, wherein the message comprises a message

2   destination indicating the one of said mobile communicators the message is for transmitting

3   to.

1   76.   A transceiver, comprising:

2   (a) a means for configuring the transceiver for communicating over two or more

3   wireless carriers with a network routing center;

4   (b) a means for monitoring each of the two or more wireless carriers for a service

5   characteristic;

6   (c) a means for selecting, based on the monitored service characteristic, one of the

7   two or more wireless carriers; and

8   (d) a means for configuring the transceiver for communicating with the network

9   routing center using the selected wireless carrier.